RIDERS, REASONS AND RECOMMENDATIONS:
A PROFILE OF ADULT CYCLISTS IN TORONTO

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A Research Report to the City of Toronto
City Cycling Committee and the Planning
and Development Department

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EXECUTIVE SUMMARY

Introduction

The cycling study reports on the number of adult cyclists in Toronto and the extent of cycling for leisure and for utilitarian purposes. The term "Utilitarian Cycling" is used here to mean cycling to work, to school, or for shopping and visiting. The opinions and concerns of cyclists and non-cyclists were gathered during telephone interviews with 800 randomly selected households in Metropolitan Toronto.

The Number of Cyclists

The major objective of the study was to estimate how many Metro adult residents bike to work, to school, for shopping and visiting, and for recreation. From the household interviews, the cycling behavior of over 2,000 individuals was tallied. From these counts the authors estimate that 350,000 Metro residents cycle on a regular basis. Of those, 100,000 cycle for utilitarian purpose, including 38,000 who cycle to work. In Metro there are 325,000 leisure cyclists among the adult population. Due to the research methods used, these are surely underestimates of the true counts.

In percentage terms, this means that 20% of the adults in the metropolitan area cycle. Six percent of all adults in Metro cycle for practical purposes, including 2% of adults who cycle to work.

In the City of Toronto, adults are equally likely to cycle, but more likely to cycle for utilitarian purposes (40,000 adults

or 8% of adults). Work cycling is done by 17,000 City residents, or 3% of City adults.

In the rest of Metro, the outer 5 boroughs and cities, there is relatively less utilitarian cycling, but there still are a larger number of cyclists in the suburban municipalities In particular there are 60,000 utilitarian cyclists, including 50,000 who use their cycles for shopping and visiting, and 21,000 who cycle to school and 21,000 who cycle to work. These numbers imply that in the outer cities 5% of adults cycle for practical purposes: 4% cycle for shopping; 2% cycle to school; and 2% cycle to work.

A Profile of Cyclists

Utilitarian cyclists tend to be younger than those who ride for leisure or who don't ride at all. Utilitarian cyclists are more likely to be male, and are younger than the cyclists in the other groups. Utilitarian and leisure cyclists share a likelihood of living in a house, whereas the non-cyclist is more likely to live in an apartment.

While utilitarian cyclists are less likely to have daily access to a car than other respondents, over 50% still do have daily use of a vehicle. In comparison, 70% of leisure cyclists and 64% of non-cyclists have daily access to a vehicle.

Frequency of Cycling

Further questioning revealed that one-half the work cyclists cycle 5 or more days per week, and three-quarters do so 2 or

more times per week. School trips by cycle are less frequent; one-third of school cyclists ride less than once per week. Shopping trips typically are made 2-4 times per week.

Overall, the information on both the frequency of cycling and the number of cyclists suggests that 6% of City of Toronto adults and 4% of Metro adults are active utilitarian cyclists (defined as those who cycle for one of the practical purposes 2 or more times per week).

Most of the cyclists going shopping, visiting, to school, or to work restrict their travel to the warmer three seasons; but many--about one-half--persist in the rain.

Cycling Habits and Concerns

Cyclists who travel to work, school, or for shopping tend to do most of their cycling in rush-hours not like commuters. Their travel times tend to be short, typically 20 minutes one-way or less. Only twelve percent combine bike and transit trips. Most trips for utility purposes are carried out using major streets.

Utilitarian cyclists are most concerned about traffic conditions and careless drivers, mentioned by over half of the cyclists. Road conditions, including obstructions such as grates and pavement irregularities, were less important -- mentioned by about 20% of utilitarian cyclists.

Leisure cyclists mentioned conflicts with cars as the primary problem, but with much less concern for the physical conditions of streets. Non-cyclists are in agreement with both

groups of cyclists that "conflicts with cars" is the worst problem, but they rank careless cyclists as worse than careless drivers. Cyclists rank drivers more of a problem than cyclists, and vice versa. But respondents in both groups were also aware of the contribution of his own group to traffic conflicts and accidents.

Questions about what utilitarian cyclists do to prevent injury indicated that most such cyclists do not take safety precautions such as wearing helmets. Twenty percent of utilitarian cyclists were aware of the City Cycling Committee. For this sort of awareness question this is relatively high visibility. Furthermore, 50% wished to be contacted in the future. Adding the 30 percent of leisure cyclists and 14% of the non-cyclists also interested in information, a total of 200 of 800 households yielded a contact person for the Committee!

Conclusion

In sum, there is no question that there are many cyclists in Metropolitan Toronto. While most are leisure cyclists, some 100,000 are utilitarian cyclists who bike to work, school or shopping. These cyclist numbers suggest that the bicycle is a serious transportation mode. Planning for land-use, transportation and public facilities should take into account this mode as more than a leisure-time activity. Many factors, particularly traffic conditions, careless drivers and cyclists, and street conditions, affect the safety of cyclists. Cyclists are concerned with these hazards, but need assistance in order

to cycle more safely. This suggests that education, training, and other programs are needed in addition to changes in physical facilities. This requires coordination between all municipalities because all types of cycling occur throughout all six boroughs and cities. There is also a need for better integration of cycling and transit, again on a Metro-wide scale. Further work with and research on the interested respondents seems to be a good first step to assist the planning process in Metropolitan Toronto.

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1. INTRODUCTION

In December, 1985, the City of Toronto Cycling Committee commissioned the School of Urban and Regional Planning to organize and administer a study designed to establish a profile of cyclists in Metropolitan Toronto. This report documents for the public the numbers of cyclists, their cycling activity, and their views.

1.1 The Emergence of Cycling

Until the early 1970's, the use of bicycles had dramatically decreased in many industrialized countries, having reached its lowest levels of use in the 1950's and 1960's (due to the high popularity of the private car). Since the early 1970's, however, a new interest in cycling has been observed in many countries and the use of bicycles has steadily increased. There are a number of reasons for this interest: the energy crisis in 1973, the increasing concern with physical fitness, and ecological concerns focussing on damage to the physical environment. In many countries the bicycle became a recognized mode of transport. In some European countries, the Netherlands, for instance, the bicycle is a traditional, frequently used mode of transportation and a number of communities have established elaborate bikeway systems and integrated the bicycle with their public transit systems.

The increased popularity of the bicycle, however, has resulted in many serious problems in urban areas, particularly in North America. In the recent past, a handful of communities in the United States have initiated steps aimed at promoting the bicycle as a viable mode of transportation. Relevant legislation has been amended and concrete measures have been taken by planning agencies so that the bicycle receives the same treatment as the other modes of transportation. It has been recognized as a vehicle that can be used not only for recreational purposes but for practical purposes as well.

Metropolitan Toronto has not escaped the popularity of the bicycle over the last decade. This rapid increase of the number of cyclists both leisure and utilitarian (those who commute to work, to school, or go shopping) has not, however, been reciprocated by actions that are necessary for the creation of a safe cycling environment. The bicycle in Metropolitan Toronto is still viewed as a mainly recreational vehicle and as such its full potential as a legitimate mode of transport for practical purposes has not been realized.

The present street system was originally built for the exclusive use of motor vehicles during a period when cycling was not considered a serious transportation mode. A situation has been created, therefore, where the bicycle is viewed by the car driver as an "intruder" and is not respected as an equal road user. This conflict between cars and bicycles has led to many problems of which most important is the physical injury and even

death for the cyclist. The situation is serious enough to warrant the attention of legislators, law enforcement officials, and planners.

This increased interest in cycling has been accompanied by increased efforts to publicize what is known about cycling and cycling facilities, and to educate the public about wise cycling. To the knowledge of the authors, however, no definitive measure exists of the number of bicycle commuters or bicycle trips in Toronto. A study by Barton-Aschman Associates, which was based on the cities of Minneapolis-St. Paul, estimated upper limits on the fraction of work plus school trips which could be made by cycle as 12 percent. This study was deductive and took into account distance, time, and climate constraints, but assumed ideal conditions (Onrun, 1976, pp. 14-18). But in contrast to the interest and growth in cycling there is little firm data. The overall aim of this study is to begin to fill this gap in our information.

1.2 Objectives of the Study

1.2.1. General Objectives

The general objectives of the study are:

1. To establish a profile of cyclists in Metropolitan Toronto and to study their use of the bicycle as both a transportation mode and a recreational vehicle.
2. To estimate the number of utilitarian cyclists (those who ride to work, school or going shopping) and leisure cyclists.

3. To estimate the number of potential cyclists and identify the reasons why they don't cycle for practical purposes and the measures that would make them take up cycling in the future.

4. To identify problems faced by cyclists and their recommendations/suggestions for improving urban cycling conditions.

5. To establish a demographic profile of cyclists so that identification of future trends and requirements can be carried out.

6. To identify cycling characteristics and cycling behaviour of utilitarian and leisure cyclists.

7. To detect the degree of awareness of the City of Toronto Cycling Committee among existing and potential cyclists; and

8. To identify areas that need further research.

1.2.2 Specific Objectives - Questions to be Answered

The study aims at answering the following questions:

- How many cyclists commute to work, school, or go shopping? How many cycle for recreation?
- In what season and under what weather conditions is cycling taking place?
- What is the frequency of cycling; how many ride regularly, occasionally, or not al all?
- What are the demographic characteristics of cyclists and non-cyclists?
- What type of street do utilitarian cyclists use and at what time of the day to they travel?
- Where do leisure cyclists do their cycling?
- What are the main concerns of utilitarian and leisure cyclists?
- What precautions do utilitarian cyclists take while cycling?
- Which problems persist according to utilitarian and leisure cyclists and which according to non-cyclists?
- Why don't leisure cyclists use the bicycle for utilitarian purposes?

- Why don't non-cyclists use the bicycle at all?
- What suggestions do cyclists have for improving cycling in Toronto?
- How many cyclists as well as non-cyclists, are aware of the City of Toronto Cycling Committee and its activities? How many want to be contacted by the Committee?

The answers to the above questions will, hopefully, aid the Cycling Committee in its effort to promote cycling and to advise the City and Metro Toronto on planning policy affecting cycling. Furthermore, the answers to these questions will also offer guidance not only to planners, but also to private supporters of cyclists and to business serving cycling.

2. RESEARCH METHOD

The study presented a research challenge because it had two main goals:

1) Estimating the number of utilitarian cyclists; and

2) Gathering the views of cyclists on cycling issues.

The first goal suggested a general population survey of some kind, with a large enough sample size to find out the number of utilitarian cyclists. The second would benefit from a larger number of utilitarian cyclists than was likely to be found through the general population.

2.1 Basic Sample Design

The solution was to use the limited research resources to conduct brief interviews with 800 households in Metropolitan Toronto to discover how many work, school, shopping, and leisure cyclists there were in each household. In this stage of the interview, the activities of about 2000 adults were tallied. In the next phase the interviewer asked to speak to a utilitarian cyclist in order to capture the nature of such cycling. When no such cyclist was available the interviewer asked appropriate questions of a leisure cyclist or non-cyclist.

The study was able to rely on a compromise between a very large poll and a small interview sample because the results of the pilot study were encouraging: more utilitarian cyclists were counted and more were interviewed than expected. The small

screening study with 800 interviews became also a study of 130-plus utilitarian cyclists, 280-odd leisure cyclists, and 380 non-cyclists.

2.2 Method of Delivery

The method of delivery was the telephone interview. No other method would allow for a general household interview survey in Metropolitan Toronto without unacceptable delays in time and increases in cost. This method suffers from some defects (it is biased against households sharing a telephone or without telephones), but is still a standard way to gather public opinion for policy analysis. The questionnaire was designed with this mode in mind. Decisions were made to exclude some detailed questions (for example to treat shopping and visiting friends as one trip purpose) and to add some questions to encourage households to participate (such as opportunities for non-cyclists to point out problems they encounter with cyclists).

2.3 Questionnaire

The survey questionnaire, which is reproduced as Appendix A, was created carefully with ease and accuracy of use in mind. It is organized into five key parts. The first part introduces the study and asks the household respondent to tally bikes and work, school, shopping and leisure cyclists in the household. It then has a series of questions which separates utilitarian respondents from leisure and non-cyclist respondents.

The second part is directed at utilitarian cyclists, who are asked in-depth questions about the frequency of their practical cycling; their persistence by weather and season; the origin, destination, and time of their most common trip; their view of problems in cycling; and their use of equipment and precautions.

The third part of the questionnaire (found on the third page of the instrument) is directed at those who only cycle for leisure purposes, and asks about location, cycling concerns, and why they don't cycle to work, school or for shopping. The fourth part, for the non-cyclist, asks about cycling concerns, and why they do not cycle.

All respondents also answered the last section which looked at awareness of the cycling committee, and asked some key household questions (size, borough, housing type) and some key personal characteristics (age, car access, sex, education). These profile questions are important to test the representativeness of the sample and to learn about the type of persons who do and do not cycle.

2.4 Sampling Procedure

The results of the pilot study suggested that if 5000 phone numbers in active exchanges were used, 800 cooperating households would be found among numbers not in service, businesses and institutions, and refusing households. Telephone numbers were selected by city applying random numbers to active Toronto exchanges. Twice as many numbers were assigned to each exchange

that was originally located in the City of Toronto. As will be noted later, this stratification by city may well have been an unnecessary precaution. But it was used to insure a large enough sample size within the City--whose Cycling Committee sponsored the research.

The final study was carried out during the first 3 weeks of March, 1986. The study team's interviewers--35 Ryerson planning students--carried out initial calls, callbacks (up to 4), and interviews. The rate of finding households and cooperating respondents remained as expected, and although the rate of finding utilitarian cyclists dropped slightly, the study design was maintained without change. The results were as follows:

Fig. 2.1: Results of Telephone Sampling

Number Not in Service	1522
Not Households	676
No Answer or Busy after 4 Callbacks	1081
Refusals	1033
Cooperating Respondents	817
Total Numbers	5129

The response rate--based on the completed responses per phone number attempted--was low (16 percent) as is common with random digit dialling and telephone interviewing. The cooperation rate--the percent of households reached who cooperated--was a more reasonable 44%.

Fig. 2.2 illustrates the numbers of persons interviewed in depth, by type of cycling they engage in.

Fig 2.2: Respondents By Type of Cycling

Non-Cyclists	381
Leisure Cyclists	286
Utilitarian Cyclists	139
Total	806

A note of caution is needed at this point. The interviewer was directed to talk to a utilitarian cyclist if possible, so the tabulation in Figure 2.2 above should not be used directly to estimate how common cycling or non-cycling is. Rather it shows that reasonable size samples of each type of cyclist are available. While only 139 utilitarian cyclists were interviewed, their activities and views can be magnified to represent the behaviour and views of utilitarian cyclists in Toronto with reasonable precision. To the knowledge of the authors this is one of the largest samples of serious cyclists ever gathered based on a general probability sample of the population.

3. THE FREQUENCY OF CYCLING IN TORONTO

One objective of this cycling study was to estimate how many adults in Toronto cycle, for what purposes they cycle, and how often they cycle. The successful completion of the survey research phase of the study allowed the authors to make these and other estimates.

3.1 The Number of Utilitarian, Leisure, and Non-Cyclists

Using the households' responses, the number of persons 15 years of age or over who regularly cycle to school, to work, for shopping or visiting or for leisure were tabulated. From the number of households and their sizes, the probability a person would cycle (for each purpose) was calculated. In other words, the proportions of persons 15 and over who cycle to school, to work, for shopping or visiting, and for leisure were all calculated. This was done separately for the City of Toronto and the rest of Metropolitan Toronto, as well as for all of Metro. These percentages are seen in Figure 3.1. Using September, 1985 population estimates based on the Metropolitan Toronto Housing Algorithm, these proportions were converted to the counts of cyclists used in Figures 3.1. and 3.2. Detail on each of the five boroughs was suppressed because the small samples for each were not reliable enough to use in estimation.

Examining Figures 3.1 and 3.2 which are used to generate later data, it is important to note the rows of each table. Adults are first divided into those who cycle and those who do

not. Cyclists are then counted in each purpose for which they bike: Utilitarian (further divided by detailed purpose) and leisure. A person may have been counted several times in the cycling categories, so the various detailed items do not add up to the total.

Figure 3.1: The Percentage of Adults in Each Zone Who Cycle, by Trip Purpose, 1985

Type of Cycling	City of Toronto	Rest of Metro	Metropolitan Toronto
Adults Who Cycle	20.2%	19.5%	19.7%
Utilitarian Cyclists	8.3%	4.7%	5.8%
to Work	3.3%	1.6%	2.1%
to School	2.3%	1.6%	1.8%
for shopping	6.8%	3.9%	4.7%
Leisure Cyclists	17.9	18.0	18.0
Adults Not Cycling	79.8%	80.5%	80.3%
Adult Population	100.0%	100.0%	100.0%

Some major points stand out in Figure 3.1. While residents of the City of Toronto and of the other five cities and boroughs residents have the same rate of cycling, about 20% cycle, the City has a higher rate of utilitarian cyclists (8% in the City versus 5% in the rest of Metro).

Figure 3.2: The Number of Adults Who Cycle, by Trip Purpose, 1985

Type of Cycling	City of Toronto	Rest of Metro	Metropolitan Toronto
Adults Who Cycle	104,855	250,790	355,645
Utilitarian Cyclists	43,145	61,135	104,280
to Work	17,310	20,770	38,010
to School	12,040	20,770	32,810
to Shopping	35,370	50,160	85,530
Leisure Cyclists	93,065	232,045	325,110
Adults Not Cycling	414,715	1,037,170	1,451,885
Adult Population	519,570	1,287,960	1,807,530

Note: All counts rounded to the nearest 5 persons. There is double-counting in the Purpose categories. These estimates are conservatively small estimates to protect against non-response bias. The error range around these estimates is approximately + and - 20% of each estimate, but the non-response correction overwhelms this error range.

Approximately 38,000 Metro residents cycle to work -- almost half are City residents. Students who cycle number 32,000; cycling for shopping or visiting is carried out by 85,000. Both of these last two categories find more adherents in the outer 5 municipalities, than in the City of Toronto. The distribution of leisure cyclists is similar to that of the adult population, with 90,000 in the City, and 230,000 in the outer ring.

In summary, across Metropolitan Toronto, 350,000 of the 1,800,000 adults cycle - 100,000 for utilitarian reasons,

325,000 for leisure. These numbers are probably the first genuine estimates of the number of cyclists in Toronto. Because of the careful protection taken against non-response bias, it is likely that these estimates are underestimates of the actual number of cyclists.

3.2 The Intensity of Cycling

The numbers generated above, which do not reflect how intensively people cycle, combined with answers to questions by 130 cyclists who ride to work, school, and for shopping, allow us to estimate the number of utilitarian cyclists and the frequency with which they cycle for these various purposes. Due to small sample sizes, these frequency distributions are both based on the overall frequency distribution for the entire Metropolitan Toronto sample.

In Figure 3.3, City residents who cycle for one of the three purposes are classified by frequency of their participation. Note that half the work commuters cycle to work daily. But a large proportion of school commuters do so occasionally. Visiting and shopping is most commonly done 2-4 times per week. The same distribution occurs in the Rest of Metro and total Metro results, but the numbers of adults in each category varies. These are shown in Figures 3.4 and 3.5.

3.3 Active Utilitarian Cyclists

In order to highlight the cyclists who use their bikes regularly for practical purposes, a final table separates out those who carry out at least one of (work, school, or shopping cycling) 2 or more times a week -- heavy or active utilitarian cyclists. These are arranged beside leisure cyclists, non-cyclists, and the total adult population in Figure 3.6.

So as the data in Figure 3.6 illustrates, 30,000, or about 6% of adults in the City of Toronto use their cycles intensively for practical duties. While we have no comparable data for auto, transit, or walking modes, this is certainly a number requiring attention in planning land-use and transportation policies, as well as facilities. In the outer 5 cities/boroughs, 3.5% of adults use their bicycles 2 or more times per week (in good weather) for work, school, shopping or visiting trips. And as

Figure 3.3: Number of Adults by Frequency of Cycling for Each Trip Purpose City of Toronto, 1985

	Frequency of Cycling				
Trip Purpose	Less than Once/Week	Once per Week	2 - 4 Times/wk	5 - 7 Times/wk	Total
To Work	2,380	1,730	4,760	8,440	17,310
To School	4,015	945	2,360	4,720	12,040
For Shopping or Visiting	3,215	6,830	18,490	6,830	35,370

Figure 3.4: Number of Adults by Frequency of Cycling for Each Trip Purpose Rest of Metropolitan Toronto, 1985

	Frequency of Cycling				
Trip Purpose	Less than Once/Week	Once per Week	2 - 4 Times/wk	5 - 7 Times/wk	Total
To Work	2,855	2,075	5,710	10,130	20,770
To School	6,925	1,630	4,070	8,145	20,770
For Shopping or Visiting	4,560	9,690	26,220	9,690	50,160

Figure 3.5: Number of Adults by Frequency of Cycling for Each Trip Purpose All of Metropolitan Toronto, 1985

	Frequency of Cycling				
Trip Purpose	Less than Once/Week	Once per Week	2 - 4 Times/wk	5 - 7 Times/wk	Total
To Work	5,235	3,805	10,470	18,570	38,080
To School	10,940	2,575	6,430	12,865	32,810
For Shopping or Visiting	7,775	16,520	44,710	16,520	85,530

noted in Figures 3.3 - 3.5, that crucial destination, the workplace is reached by 13,000 City of Toronto residents regularly (2.5% of adults). Over the entire Metropolitan municipality, 28,000 cycle to work 2 or more times per week (just over 2%).

Figure 3.6: The Number and Percentage of Active Utilitarian Cyclists, Leisure Cyclists, and Non-Cyclists in the Adult Population 1985

Type of Cyclist	City of Toronto		Rest of Metro		Metropolitan Toronto	
	Number	%	Number	%	Number	%
Active Utilitarian Cyclists*	30,400	5.9	42,640	3.3	73,040	4.0
Leisure Cyclists	93,065	19.0	232,045	18.0	325,110	18.0
Non-Cyclists	414,715	79.8	1,037,710	80.5	1,451,885	80.3
Adults	519,570		1,287,960		1,807,530	

* Defined as riding to work, school, or shopping, 2 or more times per week. These three types do not add up to the total number of adults.

Referring back to Figure 3.1, we note that the utilitarian cyclist (including occasional riders) accounts for approximately 8% of City of Toronto adults and 5% of adults in the outer municipalities.

When one looks at the frequency of utilitarian cycling, one finds that the participation rate varies from 3 to 8 percent. All these estimates were calculated in a way much more likely to underestimate the actual values than to exaggerate them.

Within these general results some distinctions emerge. City of Toronto residents are more likely to cycle to work--a not surprising conclusion given the many destinations in the City, and resulting shorter distances. The school and shopping/visiting uses of cycling were also a little more likely for a

City resident, but only slightly more likely than in the outer municipalities.

Leisure cycling is most common, followed by shopping/ visiting, then work, and finally school cycling uses. The characteristics of these various cyclists will now be explored to help explain these rates of cycling participation.

4. PROFILES OF UTILITARIAN CYCLISTS, LEISURE CYCLISTS AND NON-CYCLISTS

4.1. Demographic Characteristics

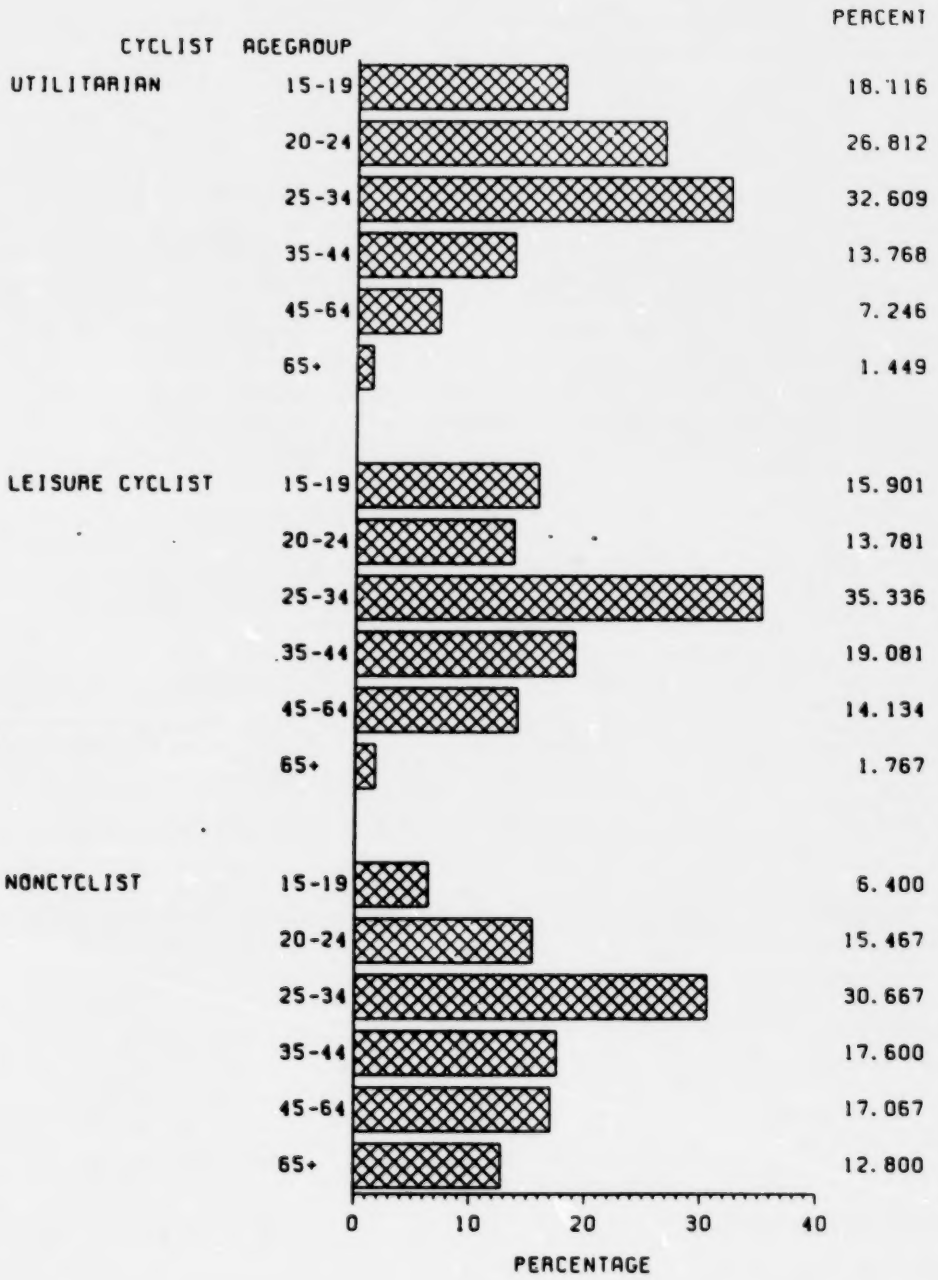
Of all utilitarian cyclists 60 percent are male and 40 percent female. While in leisure cycling the split is 50 percent male and 50 percent female. By comparison, roughly 60 percent of all non-cyclists are female and 40 percent male. These differences are statistically significant (at an error level of less than 1%).

Utilitarian cyclists are younger than leisure or non-cyclists. The median age of utilitarians is 25.6 years, whereas the median age of leisure cyclists is over 30 years (30.3) and of non-cyclists over 33 years (33.2). These age differences are not a sampling fluke, but are genuine differences. Figures 4.1 and 4.2 display the varying age distributions.

Figure 4.1:
Age of Respondents
By Type of Cycling

	Percentage		
Age Group	Utilitarian	Leisure	Non-Cyclists
15-19	18.1	15.9	6.4
20-24	26.8	13.8	15.4
25-34	32.6	35.3	30.7
35-44	13.8	19.1	17.6
45-64	7.2	14.1	17.1
65+	1.5	1.8	12.8
Total	100.0%	100.0%	100.0%

Figure 4.2: Plot of
Age By Type of Cycling



4.2 Education Level and Housing Type

The level of education of respondents in the three groups (utilitarian, leisure, non-cyclists) does not vary to a great extent. Over 50 percent of all respondents have a university or college/technical school education. The highest proportion is found among the utilitarian group; 40 percent have a university education and 22 percent have attended a community college or a technical school (Figures 4.3 and 4.4).

A total of 66 percent of utilitarian cyclists and 71 percent of leisure cyclists live in a house while the remaining live in a low-rise or high-rise apartment. The figures for non-cyclists are 51 percent and 49 percent respectively. Some indication exists that cyclists of both kinds are wealthier - as hinted at by home residence (Figure 4.5.), and suggested by educational experience.

Figure 4.3. Educational Level
By Type of Cycling

	Percentage		
Level	Utilitarian	Leisure	Non-Cyclists
Thru Grade 8	2.9	4.6	5.6
High School	34.8	38.9	40.6
Technical School/ Comm. College	22.4	21.8	22.9
University	39.9	34.7	30.9
Total	100.0%	100.0%	100.0%

Figure 4.4: Plot of Educational Level By Cycling Type

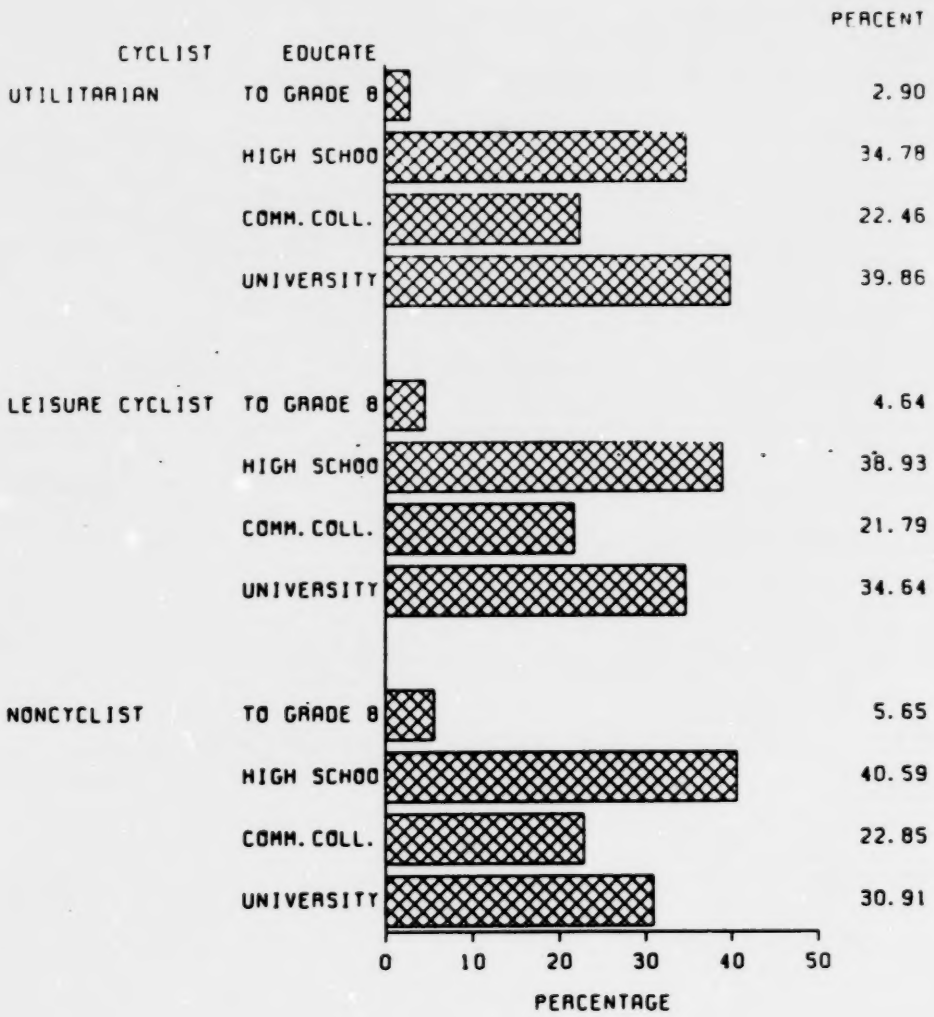


Figure 4.5: Housing Type
By Type of Cycling

Building Type	Percentage		
	Utilitarian	Leisure	Non-Cyclists
House	66.7	71.4	51.7
Apartment-low rise	17.4	16.2	21.5
Apartment-high rise	15.9	12.4	26.8
Total	100.0%	100.0%	100.0%

4.3 Access to Private Automobile or Truck

Roughly one-half (51 percent) of all utilitarian respondents mentioned that they have accessibility to a private car or truck at all times. Almost 7 percent responded that an automobile or a truck is accessible to them several times a week. Occasional access to both modes was mentioned by 15 percent while close to 27 percent specified that they never have access to a car or a truck. (Figures 4.6 and 4.7).

Based on the above responses, it is evident that many utilitarian cyclists in Metropolitan Toronto are choice rather than captive users. Although they are in a position to use another mode of transportation they choose not to, preferring to use the bicycle instead. The reasons for choosing the bicycle for utilitarian purposes seem to be, in most cases, other than necessity alone.

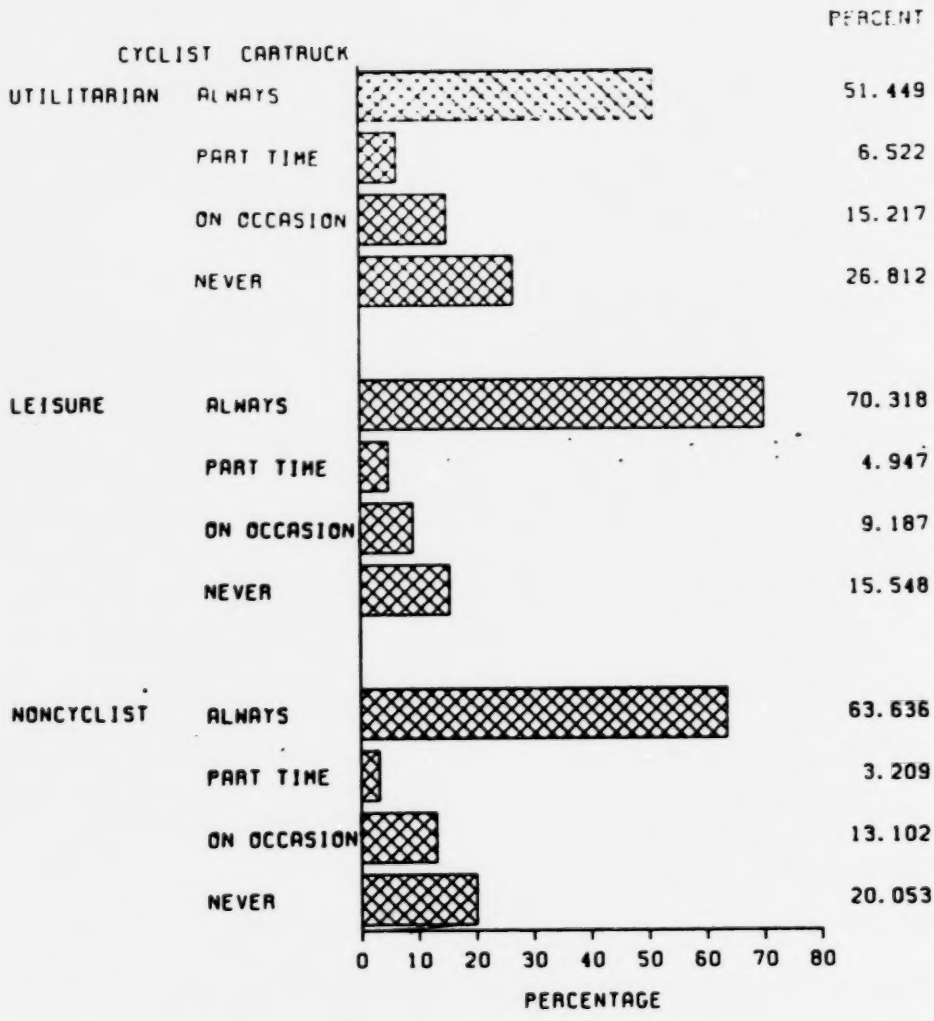
In comparison to the two other groups in the sample, however, their access to a vehicle is lower (and the difference of 15% is a statistically significant one). So if we had been

able to ask them to characterize why they bike for practical purposes, a group would probably have cited need. The balance would likely have mentioned health, fitness, ecological and environmental reasons for their activity.

Figure 4.6. Access to Private Car or Truck

	Percentage of Responses		
Category	Utilitarian	Leisure	Non-Cyclists
All The Time	51.4	70.3	63.6
Several Times a Week	6.6	5.0	3.2
Occasionally	15.2	9.2	13.1
Never	26.8	15.5	20.1
Total	100.0%	100.0%	100.0%

Figure 4.7: Plot of Access to Vehicle by Type of Cycling



5. CYCLISTS' BEHAVIOUR AND OPINIONS

5.1 Utilitarian Cycling in Adverse Weather and Seasons

Weather is very often cited as one of the greatest deterrents to bicycle use. Rain, snow, or wind along with high or low temperature (most likely) discourage a trip maker from using a bicycle. If a trip cannot be delayed for even a few minutes, the traveler may choose another mode over the bicycle to avoid the inclement weather. But, if the trip can be delayed until weather conditions improve, the probability that the trip will be made by bicycle increases.

It comes, therefore, as no surprise the fact that the vast majority of utilitarian cyclists do their cycling in the summer months (92%) while 77% cycle during spring and 63% during the fall. Only a very small number of utilitarian cyclists ride their bicycle in the winter months or throughout the whole year. This hard core group (15 individuals or 12% of the sample) are certainly the most avid cyclists. Of interest is the finding that 54% of utilitarian cyclists use their bicycle in rainy weather. It is not clear, however, whether they ride in the rain because they are caught out in it, but will not start during rain, or they will ride when rain is expected. It would be safe to state that a number of them are equipped for riding in the rain.

5.2 Cyclists' Precautions and Use of Equipment

The utilitarian cyclists were asked to indicate what type of cycle they used for commuting. Three-quarters cited 10 or 12 speed bikes; the next most frequent type was 1-5 speed bikes; and the newer mountain or city bikes were mentioned by only 4% of utilitarians.

A key question asked these practical cyclists what safety precautions they took.

The precaution mentioned most frequently (by 29% of utilitarian respondents) was the use of reflectors. Of the other precautions specified by the respondents the most commonly mentioned were use of lights and use of helmets (15% and 13% respectively). Surprisingly, an alarming 36 percent of utilitarian cyclists in Metropolitan Toronto specified that they take no precautions at all while cycling.

Figure 5.1: Precautions and Use of Equipment

Safety Precautions	Percentage of Utilitarian Cyclists
NO PRECAUTIONS	36.0
Use of Reflectors	28.7
Use of Lights	15.1
Wear Helmet	12.9
Obey Rules	7.2
Wear Bright Colours	6.5
Watch for Cars	5.8
Use Mirrors	4.3
Other Precautions	13.7

Note: Sum exceeds 100% due to multiple responses.

5.3 Cycling Habits and Concerns of Cyclists

Traffic conditions and careless drivers are the most serious concerns of utilitarian cyclists in Metropolitan Toronto. The former was mentioned by 33% of the respondents and the latter by 29.5%. Other serious issues facing utilitarian cyclists include road conditions, car doors opening, sewer grates and lack of bike lanes (Figure 5.2).

Figure 5.2: Concerns of Utilitarian Cyclists

Concern	Percentage
Traffic Conditions	33.1
Careless Drivers	29.5
Road Conditions	21.9
Car Doors Opening	12.2
Lack of Bike Lanes	8.6
Worried About Accidents	5.0
Pedestrians	4.1
Loss of Bike	4.1
Narrow Streets	4.1
Other	12.9

Note: Total exceeds 100% due to multiple responses.

The two most serious concerns of utilitarian cyclists are also shared by leisure cyclists. About 24% cited conflict with cars as their main concern while almost 21% mentioned that careless drivers pose a problem to them (Figure 5.3). Of interest is the fact that the third most serious obstacle faced by leisure cyclists is careless cyclists (10.5 %).

Figure 5.3: Concerns of Leisure Cyclists

Concern	Percentage
Conflicts with Cars	24.1
Careless Drivers	20.7
Careless Cyclists	10.5
Need More Facilities	7.3
Accidents	6.9
Public Ignorant	5.1
Laws not Clear	3.3
Bikes on Sidewalks	4.3
Other	17.8
Total	100.0%

Note: Percentages may sum to more than 100% due to multiple responses.

Even non-cyclists cited conflicts with cars as the most serious cycling concern (Figure 5.4). Overall, the concerns of non-cyclists are quite similar to those of leisure cyclists and to some extent to those of utilitarian cyclists. Probably of some significance is the fact that non-cyclists mentioned careless cyclists as their second most serious problem. While each group, cyclist and non-cyclist, has cited the other group as the more important problem, both leisure and non-cyclists do cite both groups as second or third problems. There appears to be some agreement on this serious issue.

Figure 5.4: Concerns of Non-Cyclists

Concern	Percentage
Conflicts with Cars	27.0
Careless Cyclists	20.3
Careless Drivers	13.1
Laws Not Clear	12.2
Need More Facilities	7.7
Public Ignorant	3.2
Bikes on Sidewalks	6.8
Cyclists Going Wrong Direction	7.7
Accidents	3.2
Other	31.1

Note: Total exceeds 100% due to multiple responses.

These findings generally agree with those of a survey carried out in Washington, D.C. in the 1970's which found that "...traffic conflict and inconsiderate automobile drivers were the two overwhelming obstacles facing the respondents in using their bicycles..." (Shaw, 1976, p. 53). Other similar surveys in the United States have shown similar results.

It is not surprising that traffic conditions, careless drivers, and road conditions were cited as the three major concerns of utilitarian cyclists in Metropolitan Toronto. Particularly, if one considers the fact 70% of the respondents use major streets for their cycling while only 26% use mainly local streets and a mere 4% use bike paths. Utilitarian cyclists seem to be attracted to major streets not only because they are the most direct routes but also because of smoother grades, fewer stops, presence of commercial areas and high likelihood that the origin and destination is on or near a major street.

It seems that the use of major streets by utilitarian cyclists reflects a preference for the advantages they offer to all traffic. Based on the responses of utilitarian cyclists it could be inferred that their needs would be met by developing and implementing methods aimed at a safe sharing of major streets by both the cyclists and the automobile driver.

It should also be noted that time of travel is of crucial importance in this case. The majority of utilitarian cyclists travel during the morning and afternoon rush hours when the potential for conflict with other road users is greatest. Of all utilitarian cyclists 66% leave their residence during the period between 7:00 - 9:00 a.m. and 52% return between 4:00 - 6:00 p.m. (Figures 5.5 and 5.7.)

Figure 5.5: Distribution of
Departure Times By Utilitarian Cyclists

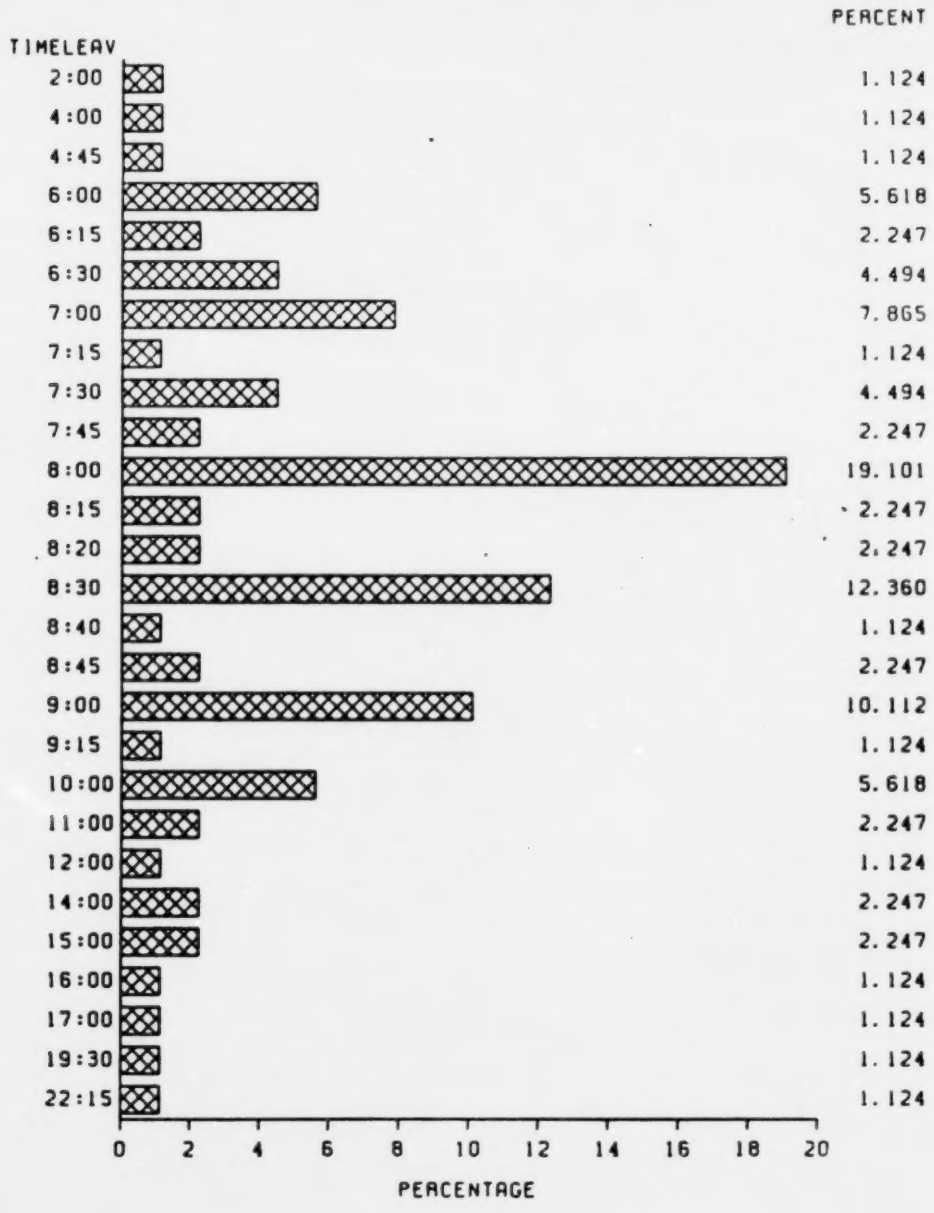
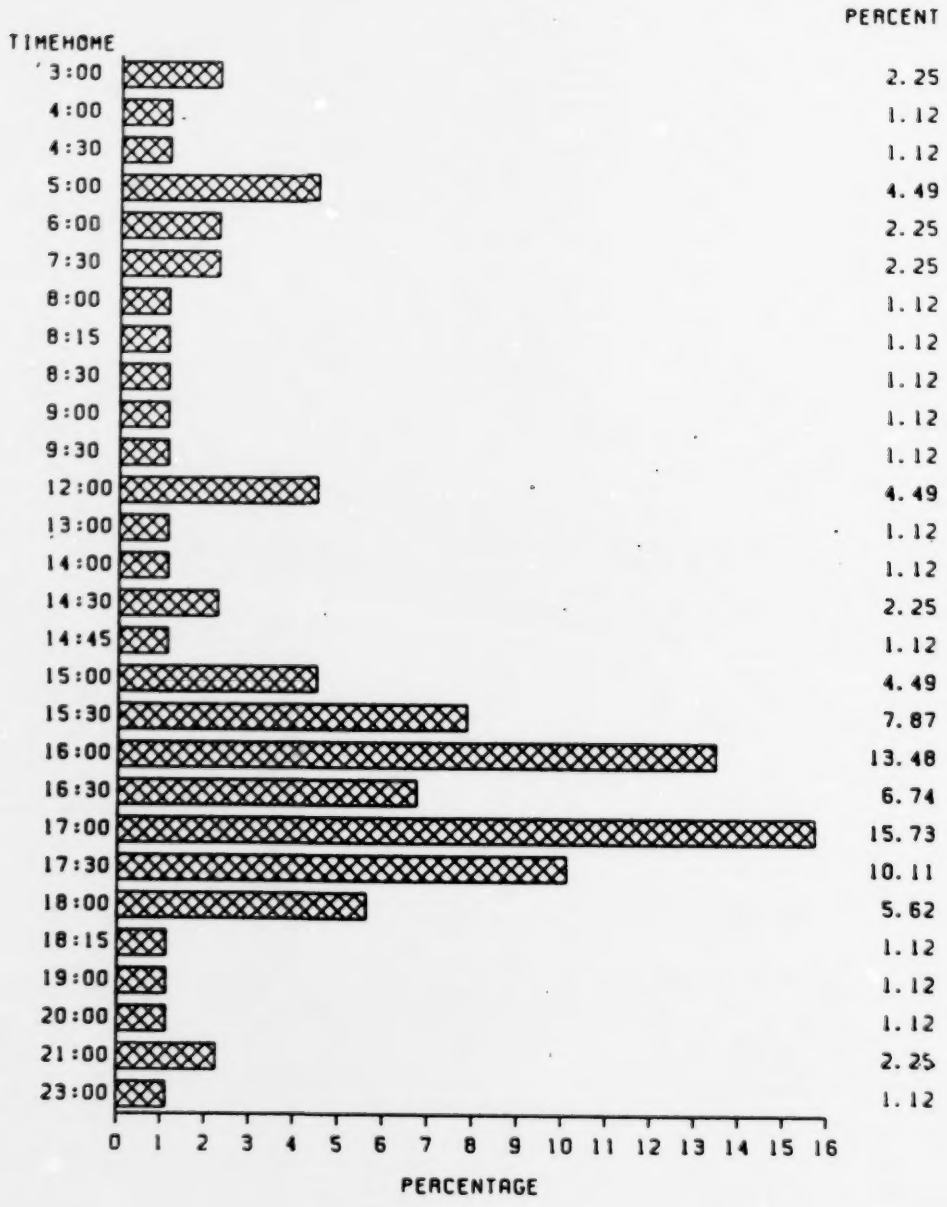
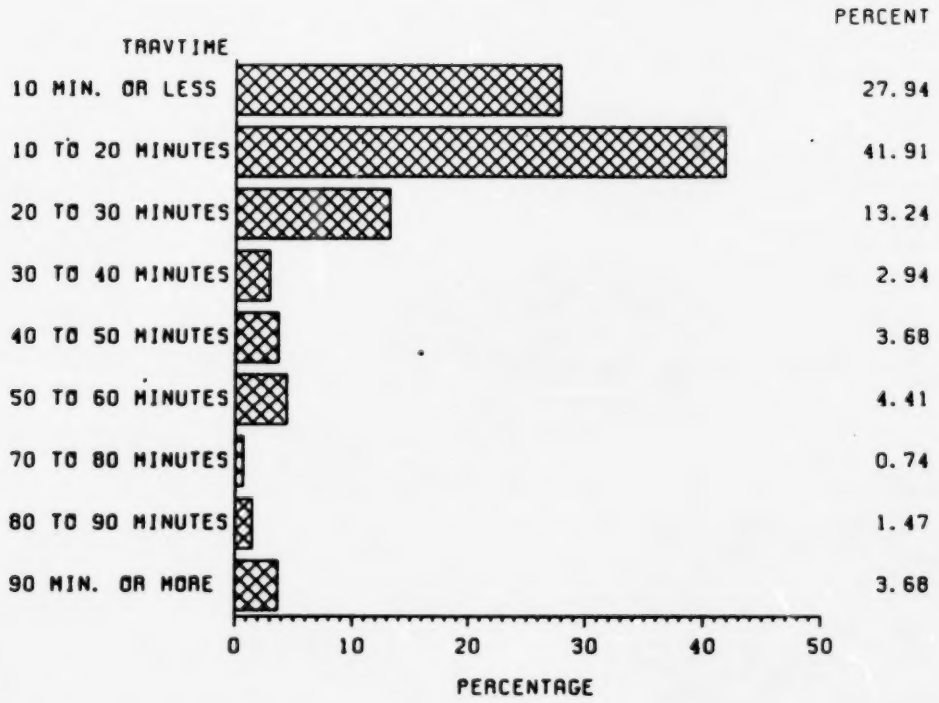


Figure 5.6: Distribution of
Home Arrival Times by Utilitarian Cyclists



The travel times by utilitarian cyclists tend to be short, with a median one-way time of 15 minutes, and a mean time of 20 minutes. These short commuting times reinforces comments by leisure cyclists about the time and distance constraints to their cycling to work or school. (Figure 5.7)

Figure 5.7: Frequency of
One-Way Travel Times
By Utilitarian Cyclists



5.4 Bicycle Use in Conjunction with Public Transit

There is no doubt that suburbanization can be a driving force for the growth of bicycle-transit linkage. In many suburban towns in Japan, West Germany, Denmark, and the Netherlands, 25 to 50 percent of rail station access trips are made by bicycle. The number of trips involving a combination of bicycles and public transportation has quadrupled in Japan and doubled in Denmark since the early 1970's (Replogle, 1984, p. 55). In a transit-supporting city such as Toronto, public transit agencies, including the Toronto Transit Commission, could substantially increase suburban transit use without increased operating costs by improving bicycle-transit integration. European and Japanese examples clearly indicate that there are a lot of benefits to be had by promoting greater integration of the bicycle with public transit.

Our research found that only 12% of utilitarian cyclists combine their cycling with public transit. Clearly, an area with great potential has remained unexploited by all concerned. It should not, however, come as a surprise especially when one considers the fact that traditionally the bicycle has not been treated as a legitimate mode of transportation and, therefore, no steps have been taken to promote it as a viable alternative to the private automobile, particularly for accessing suburban subway stations. Furthermore, lack of secure bicycle parking facilities at subway stations discourages people from using their bicycle in combination with public transit.

There is no question that improved bicycle-transit linkage can also expand the market penetration for express bus and suburban subway stations. In a survey by the California Department of Transportation of those who use bicycle lockers at park-and-ride lots in the San Francisco region, it was found that 68 percent of the bike-and-ride travelers at lots served by buses and 30 percent of the bike-and-ride travelers at lots served by suburban subway stations formerly drove automobiles to make their trip (Replogle, 1984, p.59).

In Santa Barbara, California, a comprehensive bicycle-transit integration system combining the provision of parking at bus stops and a bike-on-bus service dramatically boosted transit market penetration in areas beyond walking distance of bus routes. Ridership on the demonstration project bus routes rose by 46% in 1980, whereas the level of bus service increased only 19% and system-wide ridership grew by 15%. The share of access trips made by bicycle to these routes jumped from 1.5% to 23% over 2 years (Replogle, 1984, p.60). Similar surveys in the Netherlands and Japan have shown very similar results.

It is clear then that bicycles can play a crucial role in providing access to suburban transit services. The potential market for bicycle-transit integration in Canadian cities, particularly Metropolitan Toronto, is quite large. Such an integration of bicycles with transit and the introduction of bike-and-ride facilities would certainly open up new opportunities for the Toronto Transit Commission.

5.5 Awareness of the City Cycling Committee

The question about the Cycling Committee revealed that relatively few utilitarian cyclists knew of it: 20 percent. Of the leisure cyclists, 8 percent were aware of the Committee.

But interestingly enough 50 percent of utilitarians (69 persons) would be willing to be contacted by the Committee--they gave permission for their phone number to be passed along. And 29 percent of leisure bikers (82 persons) would also be interested in talking to the Committee. While only 5 percent of the non-cyclists know of the Committee, over 14 percent would be interested in being contacted (54 persons).

Overall, the awareness of the Committee could be raised, but the 20% is reasonably high for a specialized group. The striking finding is the large number of persons interested in being contacted by the Committee, a total of over 200 persons of the 800 interviewed!

5.6 Leisure Cyclists: Where Do They Cycle and Are They Likely to Cycle Utilitarian

As Figure 5.8 indicates, almost a third of leisure cyclists ride in residential areas, most likely in their own neighbourhood. Parks, ravines, local streets and recreational trails were some of the other areas where people cycle. When asked to suggest remedies which ought to be taken by both governments and private enterprise, a majority of them (60%) mentioned bike paths as their top priority. Other responses included methods

to reduce traffic, the need for more storage facilities and educating the public.

Figure 5.8: Areas in Which Recreational Cycling is Taking Place

Area	Percent
Residential Areas	32.6
Recreational Trails	18.0
Parks/Ravines	16.9
Local Streets	12.9
By the Lake	5.1
High Park	4.5
Downtown	2.7
No Particular Area	5.1
Other	3.0
Total	100.0%

The reasons why leisure cyclists do not cycle for utilitarian ends are shown in Figure 5.9. The most serious obstacle to cycling for practical purposes seems to be long distances (cited by 38%). A measure that would at least partly solve this problem seems to be a better integration of the bicycle with the public transit system. If people were given the opportunity to combine cycling and public transit some of them might consider using their bicycle for practical purposes. Other reasons given for not cycling utilitarian include inconvenience (16%), use of car instead (11%) and that cycling is dangerous (10%).

On the other hand, non-cyclists do not cycle at all because of old age, lack of interest and other reasons such as pregnancy, illness, cannot carry things, don't know how to cycle, responses which are not surprising at all (Figure 5.10).

Figure 5.9: Reasons Why Leisure Cyclists Do Not Cycle for Practical Purposes

Reason	Percent
Too Far	38.1
Not Convenient	15.8
Use Car Instead	11.3
Dangerous	10.2
Poor Weather	6.5
Can't Carry Things	5.1
Other	8.3
No Reason	4.7
Total	100.0%

Figure 5.10: Reasons Why Non-Cyclists Do Not Cycle at All

Reason	Percent
Too Old	30.1
Not Interested	21.8
Prefer Car	5.4
Not Enough Time	5.4
Risk of Injury	3.6
Disabled	2.9
No Reason	8.2
Other	19.0
Total	100.0%

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 The Number of Cyclists in the City and Metro

The key result of this study is that in Metropolitan Toronto there are 100,000 adults who cycle for practical purposes. Many of these cyclists bike to work regularly, although only a hardy few bike year-round and only about one-half ride in poor weather. These estimates are based on a sufficiently large sample of households, and correction was made for major sources of error, so that these are very careful estimates--if anything they understate the numbers. To repeat, in the City of Toronto 8% of adults are utilitarian cyclists. Across all of Metro the rate is about 6%.

While City of Toronto residents <u>are</u> more likely to cycle than "suburban" residents, the larger population size outside the City of Toronto means that <u>more</u> cyclists of all kinds live in the outer 5 cities and boroughs than in the City of Toronto. Surprising as this may be to dedicated urbanites, this cycling population is a metropolitan phenomenon. Indeed there is no reason to suspect it stops at Metro's borders, it likely occurs throughout the Province and Canada at least in built-up areas. This suggests that municipal efforts to improve cycling be expanded to include all the municipalities, including the Metropolitan government.

As for leisure cycling, it is much more common than utilitarian cycling. The rate of leisure cycling is nearly identical in the inner City and the outer municipalities: 18% of adults.

6.2 Who Are the Cyclists?

Among the three groups interviewed, the utilitarian cyclists, the leisure cyclists, and the non-cyclists, certain types of persons are relatively common.

The utilitarian cyclist is more likely to be male than those who cycle for leisure or not at all. The utilitarian cyclist is younger--almost one-half are under 25, although there is a solid participation by those up to 45 years of age.

The educational profile of the utilitarian cyclist indicates a larger proportion of university-educated persons, but the differences are not great enough to insure that this is not a sampling fluke. The utilitarian cyclist lives in accommodation similar to that of the leisure cyclist, but is more likely to live in a house than the non-cyclist. While utilitarian cyclists are definitely less likely to have access to a car than other respondents, over half have one always available.

The leisure cyclist is intermediately located between the utilitarian and non-cyclists; the leisure cyclist is equally likely to be a man as a women; the leisure cyclist is five years older, on the average, than the utilitarian cyclist; and the educational background of leisure cyclists is similar to the total pool of respondents.

Two indicators suggest that leisure cyclists have a relatively established life-style. They have the highestest proportion of respondents living in houses and the fewest living in apartments. Also they have the greatest auto accessibility

6.3 The Patterns of Cycling

Looking at utilitarian cycling, one finds that work cyclists tend to ride regularly (usually 2 or more times per week, often every day). School cyclists (which includes, of course both secondary and post secondary students) are much more likely to cycle only once a week or less. Shopping and visiting friends by cycle tends to occur 2 to 4 times per week. Only 12 percent combine cycling with transit riding.

While practical cycling is this common in "good weather", over half these cyclists keep going in rainy weather. Very few (about 12 percent) ride year round. For utilitarian cycling most riders do use major streets. Typically they ride 15 or 20 minutes on their most frequent cycling trip, and a typical commuter day pattern of morning rush-hour and afternoon rush-hour times appears in the answers of respondents.

Leisure cyclists, as one might suggest, tend to cycle in their neighborhood or in parks and ravines.

6.4 Cyclists' Views and Awareness of the Committee

Cyclists are most concerned with the ongoing problem of conflicts with motor vehicles on the road. Points mentioned include careless drivers, opening doors, and competing for space to travel.

Less frequently mentioned were problems with the physical layout or condition of the streets used: pavement, streetcar tracks, grates and manholes. But the first concerns of utilitarian cyclists (those most likely to face congestion and to need to keep up with traffic flow) are clearly conflicts with cars. Their use of major streets increases the frequency of these conflicts.

Unfortunately most practical cyclists do not take safety precautions such as helmets or gloves. This is suggestive of a lack of awareness on their part: accidents are feared but safety precautions are rare. The need for more education about safety precautions, accident prevention and proper cycling technique are suggested by these results.

Some cyclists are aware of the City Cycling Committee--about 20% of the utilitarian bikers and 8% of the leisure cyclists. But fully half of the utilitarians would like to be contacted by the committee directly. Many of the other two groups would also be interested in being interviewed again. The total number interested in participation was over 200, or 25% of respondents.

The combination of few precautions, great concerns over conflicts in traffic, and willingness to be involved suggest

that the role of the Committee in education and transportation planning be increased. But to do this some way is needed to increase awareness in the entire cycling audience.

6.5 Policy Recommendations

It is not the place of public opinion research on policy issues to make specific recommendations; more work by municipal staff, the Cycling Committee and citizen representatives, and City Council is required before such recommendations are appropriate. However, as researchers not previously involved in cycling policy we have been impressed by some characteristics of cyclists that deserve follow-up in the policy-making process.

6.5.1. Accept Cycling as a Transportation Mode

The number of cyclists is such that one of the most important needs is an accepted place for the bicycle as a transportation mode in planning and data gathering.

6.5.2. Utilitarian Cycling Throughout Toronto

Purposeful cycling, while it may be done over relatively short distances for trips under 1/2 hour, occurs throughout Metropolitan Toronto. Planning for cycling may be done predominantly by local cities--it should be done by all of them in a coordinated fashion. If deemed appropriate, the regional municipality (in this case Metro government) may need to be fully involved in this coordination process.

6.5.3. Safety and Educational Needs

There is a need for safety precautions and education both of cyclists and of vehicle drivers about preventing accidents.

6.5.4. Need for Cycle/ Transit Integration

Many cyclists who do not cycle commute cite reasons which are related to long distances, short commuting time available, goods carried, or other serious obstacles to cycling. Many of these persons may never cycle for utilitarian ends. But the low use of transit/cycle combinations suggests one way to increase both transit and cycling use: better integration of the two modes.

6.6 Further Research Needed

6.6.1. Further Work With This Data

Under time and personnel constraints, some work on this data has been postponed. This includes geographical analysis of origins and destinations by cyclists, the creation of a dataset of utilitarian cyclists which is adjusted in several ways for the actual distribution of population in the boroughs, and more graphic display of results.

6.6.2. Follow-Up Work With All Cyclists

The cyclists who indicated an interest in being contacted by the Committee would be interviewed in depth with a questionnaire designed for that purpose. Alternatively they could be brought together for gathering their ideas and opinions in a group setting. One useful technique involves small groups which identify and then vote on the most important issues at hand;

this is called the nominal group technique (Dickey and Watts, 1978, pp. 207-212). Also the respondents who cycle could be encouraged to become Cycling Committee members if they enjoyed participating in the interviews or the group sessions.

6.6.3. Large Scale Survey of Utilitarian Cyclists

Now that there is some baseline data on the number of cyclists, their commitment to various types of cycling, and their demographic characteristics, a study aimed at cyclists through "cycling channels" could provide more detailed information on the cycling group. This may, however duplicate work by the Ontario Cycling Association or other groups, and the benefit of this study must be confirmed before it is carried out.

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A: Survey Questionnaire

1

TORONTO CITY CYCLING SURVEY Telephone No. ___ _____

STUDY QUESTIONNAIRE Group No. ___ Interviewer's Initials _____

Hello!, I'm [your name], a Ryerson student calling for the Toronto City Cycling Committee. I am not selling anything! We would like your opinion about cycling and cyclists in Toronto. I need just a few minutes of your time ...

A A1)Does your household own any bicycles? __YES __NO **if NO TURN PAGE to G1)**

If YES: PLEASE ANSWER FOR YOUR **HOUSEHOLD** THESE QUESTIONS:

B B1)How many bikes are there in your household? _____

B2) How many persons 15 years and over in your household RIDE A BIKE? _____

If ANY do GO TO C1) **If NONE do: TURN PAGE AND GO TO G1)**

C C1)How many persons 15 years & over ride a bike to SCHOOL in good weather? ___

C2) .... to WORK in good weather? _____

C3) .... for SHOPPING or VISITING FRIENDS, in good weather? ____

C4) .... for LEISURE in good weather ? ___

If ANY do utilitarian GO TO D1) **If NONE do utilitarian TURN PAGE to F1)**

D D1)Do **you yourself** ride a bike to work, school, or shopping? __YES __NO

If YES TO E1) **if NO:** D2)Best time to call back: Day_____ Time____

D3)Do **you yourself** ride at all?

YES ___ **(to F1)** NO ___ **(to G1)**

E E1)Last year, during good weather, how many days per week did you ride a bike...

[ask only appropriate]	5-7 days/wk	2-4 days/wk	one day/wk	less than once/wk
...to get to WORK?	( )	( )	( )	( )
...to get to SCHOOL?	( )	( )	( )	( )
...to go SHOPPING or VISITING	( )	( )	( )	( )

E2)Do you cycle in combination with public transit to get to [work/school shopping] ? __YES __NO

if YES, describe how_____

E3)In what seasons do you cycle to [work/school/shopping]? (indicate all seasons)

Spring _____ Summer _____ Fall _____ Winter _____ All Year _____

E4)What are the origin and destination of your most frequent bicycle route (in terms of major intersections)?

Origin (Major Streets) _____

Destination (Major Streets) _____

E5) On the average, how long does that trip take, one way? Time _____ (minutes)

E6) At what time of day do you take this trip? Varies _____

Leave home _____ (A.M.) (P.M.) Return to home _____ (A.M.) (P.M.)

E7) What type of streets do you use: (check all that apply)

( )major streets ( )local streets ( )bike paths

E8)Do you bike to [work/school/shopping/visiting] during rainy weather ?

Never do ___ Seldom ___ Bike as Usual ____

E9)What are your major concerns or problems about cycling to [work/school/-shopping/visiting]?

_____

_____

_____

E10)What equipment do you use and what precautions do you take to reduce the possibility of accident or injury while cycling?

_____

_____

E11)What kind of bike do you use most for commuting or shopping?

( )10 or 12-speed racing-type bike
( )one,3, or 5 speed touring bike
( )mountain bike or wide tire city bike
( )other, please specify:_____

TURN PAGE AND GO TO QUESTION H1)

FOR THOSE WHO LEISURE CYCLE ONLY (THOSE NOT BIKING TO WORK/SCHOOL/SHOPPING):

F F1)Where do you do your leisure cycling? _____

_____

_____

F2)Why don't you use your bike to get to work/school/shopping?

_____

_____

F3) What, if anything, could governments or business do to encourage you to bike to work or school?

_____

F4) What problems or concerns do you have about cylists or cycling in Toronto?

_____

_____

FOR ALL RESPONDENTS, GO TO H1)

_____

G FOR THOSE NOT OWNING A BIKE, OR NOT USING A BIKE, AT ALL:

G1)Are you likely to take up any form of biking in the next few years?

( ) YES ( ) NO

if NO, G2)Why not? _____

_____

if YES, G3)Are you likely to then bike to work or school or shopping?

( ) NO ( ) YES

G4) What problems or concerns do you have about cyclists or cycling in Toronto?

_____

FOR ALL RESPONDENTS, GO TO H1)

4

CYCLING COMMITTEE AND DEMOGRAPHIC QUESTIONS FOR ALL RESPONDENTS

H

H1)Are you aware of the activities of the Toronto City Cycling Committee?

___ YES ___ NO --> If NO "The Toronto City Cycling Committee is an organization which encourages cycling in Toronto through educational and city planning activities."

H2)Would you be interested in being contacted by the Committee in its work to find out what cyclists in Toronto need?

___NO ___ YES, please give the Committee my phone number.

To provide advice on cycling we need to ask a few brief questions about you:

H3)How many persons 15 years of age or over live in your household? _____

H4)In which of the 6 cities and boroughs of Metro Toronto do you live?

( )Toronto ( )Etobicoke ( )York ( )North York ( ) East York ( )Scarborough

H5)What type of building do you live in?

( )house ( )apartment,low-rise, 1-3 stories ( )high-rise apartment

H6)How often do you have access to a car or truck ?

( )all the time ( )several times per week ( )occasionally ( )never

H7)In what age group are you?

( )15-19 ( )20-24 ( )25-34 ( )35-44 ( )45-64 ( )65+

H8)Sex of Respondent: ( ) Male ( ) Female

H9)What is the highest level of education you have completed or are attending?

( )through Grade 8 ( )High School ( ) Technical School/ Community College ( )University

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY!